Appendix.

[Vide answer to the starred question No. 999 asked by Sri A. A. Rasheed, Sri T. S. Ramaswamy and Sri N. R. Thiagarajan at the meeting of the Legislative Assembly held on 22nd March 1961, page 293 supra.]

A.—A report on the visit of the Chief Minister and Finance Minister to the Steel factories at Jamshedpur, Rourkela and Bhilai.

The programme included a visit to the Tata Iron and Steel Works on December 7th, Rourkela on December 8th and Bhilai on December 9th, 1960.

2. The programme at Tatanagar started off with a visit to the Tata Locomotive and Engineering Company (TELCO) which turns out annually 100 metre-gauge locomotives and 12,000 Mercedez-Benz trucks. It is significant that the indigenous content of the locomotives produced at TELCO is as high as 98·5 per cent. The excellent performance of TELCO is based on a completely mechanized foundry which can cast up to 500 tons a month, a modern machine shop and a well-equipped tool-room.

3. This was followed by a visit to the Indian Tube Company, a joint venture started in 1956 by Tatas and Stewarts Lloyds. This firm manufactures steel tubes of various sizes by three different processes, viz.,

(1) The Fretz-Moon process in which the tube is formed by welding ;

(2) the Electrical Resistance Welding Process in which the tube is formed by injecting a high frequency electric current and jointing the two ends of the tube ; and

(3) the seamless process in which the tube is formed by piercing heated steel billets.

4. The programme was rounded off with a visit to one of the steel-melting shops of the Tata Iron and Steel Company (TISCO) where pig iron is converted into steel which is cast into ingots, a blooming mill in which ingots are cogged into blooms of different sizes and the Medium Structural Mill which rolls angles, channels, beams, rounds and other structurals. These units were symbols of the recently completed expansion programme under which the annual capacity of TISCO was doubled from one million tons to 2 million tons of steel ingots.

5. While at Jamshedpur, the Ministers were also shown round the National Metallurgical Laboratory by its Director Dr. B. R. Nijhawan. Of special interest at the National Metallurgical Laboratory is the Pilot Low Shaft Furnace which has been in operation for nearly two years. Set up with the assistance of the West German firm, Demag, the furnace has a rated output of 15 tons of pig iron per day and involved an investment of Rs. 27 lakhs. Pig iron has been produced in this furnace using 100 per cent non-coking coal. Tests will shortly be carried out in the

[22nd March 1961

Pilot Low Shaft Furnace using the magnetite ores of Salem, for which purpose 2,000 tons of Salem ore and 2,000 tons of limestone, also from Salem, are being sent to the National Metallurgical Laboratory. During the visit to the National Metallurgical Laboratory, attention was specially drawn to the valuable work done at the Laboratory on the beneficiation and sintering of Salem magnetite ores and the production of substitute alloys like nickel-free stainless steel.

6. On December 8th, the Ministers visited the Rourkela Steel Project, one of the three steel projects undertaken by the Government of India during the Second Five-year Plan. The Technical Consultants of the project are the West German Firms, Krupps and Demag. The steel plant has an installed capacity of 1 million tons of ingot steel per annum and is served by Rolling Mills producing exclusively flat products like plates, strips, tin-plates, etc. The most distinctive feature of Rourkela is that, for making 75 per cent of the steel output of the plant, viz., 750,000 tons per annum, three L.D. converters are employed. The L.D. process is an Austrian process for steel making and significantly bears the names of two Austrian industrial centres Linz and Donawitz. The characteristic feature of this process is that oxygen of 99·5 per cent purity is used for the production of steel. Its superiority over the conventional processes of steel-making consists in its relatively lower capital and processing costs. Besides, it is a fast process and one ton of L.D. steel can be produced per minute.

7. The Ministers were shown round the Bhilai Steel Project on December 9th, 1960. This has been established with Soviet assistance and has an installed capacity of one million tons of ingot steel. Bhilai concentrates mainly on the production of rails and structurals. One lakh and fifty thousand tons of billets are also produced annually for supply to re-rollers. The two distinctive features of this Project are—

(1) High top pressure is employed in the blast furnace, which results in a higher output of pig-iron per ton of coke ; and

(2) a sintering plant has been set up to render iron-ore fines which are too small for use in the blast furnace suitable for reduction in the furnace by forming them into large size lumps.

